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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,209	02/27/2004	Sergio Belli	05788.0208-01	4686
22852	7590	08/02/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EWALD, MARIA VERONICA	
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/787,209	BELLI ET AL.	
	Examiner	Art Unit	
	Maria Veronica D. Ewald	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 - 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20 - 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

13. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 27, the applicant states "an apparatus according to claim 26, wherein system of gears, or pulleys and gears subjects the at least one conducting element to a constant pull between 600 and 1500 m/min." Subjecting the conducting element to a constant pull between 600 and 1500 m/min provides a process limitation, which does not further limit the apparatus being claimed and provides no additional structural limitation to the apparatus, and therefore renders the claim indefinite.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 – 21, 23 – 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon (U.S. 3,922,128) in view of Miki, et al. (5,578,208). Solomon teaches an apparatus for the production of a cable having at least one covering layer, said apparatus comprising at least one charging hopper (item 30 – figure 1; column 2, lines 16 – 18), at least one extruder (item 28 – figure 1; column 2, lines 16 – 18), one

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extrusion screw (item 32 – figure 2; column 2, line 18), and at least one extrusion head inside of which is contained a die (item 16 – figure 1; column 2, lines 24 – 25).

Furthermore, the reference teaches that the apparatus is further comprised of at least one device for unwinding said conducting element (item 12 – figure 1; column 1, lines 66 – 67), a breaker plate positioned downstream of said at least one extrusion screw (item 38 – figure 2; column 2, lines 44 – 45), at least one device for winding said cable (item 26 – figure 1; column 2, lines 14 – 15), at least one cooling unit for cooling said cable (item 20 – figure 1; column 2, lines 7 – 8), and a drying stage positioned downstream from said at least one cooling unit (items 22, 24 – figure 1; column 2, lines 10 – 13). Solomon, however, does not teach the presence of a filter support plate nor a filtration unit in conjunction with the breaker plate.

In a method to filter molten resin for use in a manufacturing process of films or fabric made of polypropylene, polyester, and the like, Miki, et al. teach the use of a filtering device to remove foreign substances or impurities from the resin (column 1, lines 7 – 11). The filtering device is positioned downstream of the extruder (column 2, lines 18 – 20). Furthermore, Miki, et al. teach that the filtering device is comprised of a cylindrical filtering member formed with a large number of projections and recesses; and a radially arranged supporter for supporting the cylindrical filtering member (column 3, lines 49 – 51). The reference further teaches that the molten resin is allowed to pass through the filtering member at arc-shaped recessed portions, and flows through spaces formed between the recessed portions of the filtering member and the recesses of the supporter (figures 5 and 7; column 3, lines 62 – 64). This reads on the Applicant's claim

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that the extruder have at least one filtration section with a filter support plate, comprising an internal surface and a plurality of elements which protrude therefrom and define a plurality of sectors between and within which the filtered composition flows.

It would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the extruding apparatus of Solomon with the filtration section or filtering device of Miki, et al. for the purpose of filtering out foreign matter from molten resin as it passes through the extruder as taught by Miki, et al.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon in view of Miki, et al. and further in view of Marin (U.S. 5,182,066). Solomon and Miki, et al. teach the characteristics previously described, but do not teach that the extruder apparatus have a crosslinking unit.

In a method to apply a layer of insulation around an electrical cable core, Marin teaches the use of an extruder apparatus. Marin also teaches that a cross-linking section may be used in which a cross-linking agent is added to the heated plastic and subsequently mixed (column 3, lines 39 – 40). This reads on the Applicant's claim that the apparatus be comprised of at least one crosslinking unit positioned before said at least one cooling unit.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the extruding apparatus of Solomon configured with the filtering device of Miki, et al. to further incorporate the cross-linking section of Marin for the purpose of adding a cross-linking agent to the melted plastic.

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Claim 26 is rejected as being unpatentable over Solomon in view of Miki, et al., further in view of Portinari. (U.S. 4,673,540). Solomon and Miki, et al. teach the characteristics previously described but do not teach that the extruder have a system of pulleys, gears or pulleys and gears.

In a method to cover an optical cable with plastic having helical grooves in its surface, Portinari teaches the use of a pulley mounted to freely rotate on a support extending from a shaft driven by a gear to advance the cable into and out of the extruder (column 4, lines 25 – 26). This reads on the Applicant's claim that the at least one conducting element is subjected to a constant pull by a system of pulleys, gears, or pulleys and gears.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the extruding apparatus of Solomon and Miki, et al. with the system of pulleys and gears of Portinari for the purpose of moving the cable through the production line at a constant pace as taught by Portinari.

Claim 27 is rejected as being unpatentable over Solomon in view of Miki, et al., further in view of Portinari and further in view of Rosato (*"Extruding Plastic, A practical processing handbook"*, 1998). Solomon, Miki, et al. and Portinari teach the characteristics previously described, but do not teach that the cable is subjected to a pull of between 600 and 1500 m/min, respectively.

In the above-listed handbook, Rosato teaches that typical output rates of extruders for coating cable can be at least 1300 m/min for certain products, which is

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within the range stated above by the Applicant. Thus, it is known to one of ordinary skill in the art that the range stated above is typical and can be attainable by conventional tension capstans, pulleys or gears.

It would have been obvious therefore, to modify the extruder of Solomon with the filtration unit of Miki, et al. to further incorporate the pulleys/gears of Portinari to operate such a system of pulleys/gears within the range of 600 and 1500 m/min for the purpose of controlling the output rate of the extruder and its associated equipment as discussed by Rosato.

Response to Arguments

15. Applicant's arguments filed July 1, 2005 have been fully considered but they are not persuasive. The Applicant argues that claim 27 is not indefinite and is clear to a hypothetical person possessing the ordinary level of skill in the pertinent art. The Applicant further argues that subjecting the at least one conducting element to a pull between 600 m/min and 1500 m/min is an operational limitation not a method limitation.

The Examiner notes that the limitation is an operational limitation; however, does not provide any further structural or physical limitation to the apparatus being claimed and thus, renders such a claim indefinite, regardless of whether one possessing ordinary level of skill in the pertinent art clearly understands such an operational limitation. Per the Applicant, functional language, in itself, does not render the claim indefinite. Functional language, however, is typically used "in association with an

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element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.” MPEP 2173.05 (g).

In claim 27, the functional language “subjecting the conducting element to a pull between 600 m/min and 1500 m/min” provides an operational step to using the apparatus being claim, not a physical or structural limitation. Claim 27, is therefore, a single claim, which claims both an apparatus and the method steps of using the apparatus, and is indefinite under 35 U.S.C 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).

However, to address the Applicant’s amended claim, the Examiner has applied new art that shows the operational range specified is typical for extruder equipment used to coat cable.

Applicant’s arguments with respect to claims 20 – 25 and 28 have been considered but are moot in view of the new ground(s) of rejection. The Applicant argues, with respect to claims 20 – 25 and 28, that Solomon does not teach a filter support plate. Solomon teaches a breaker plate; however, breaker plates, themselves can be used to filter out impurities and can also be fitted with screens to filter out smaller impurities to obtain a higher quality resin or plastic (*Kinoshita*, U.S. 4,174,198).

To address the Applicant’s argument that the combination of references previously failed to show the apparatus being claimed – specifically, the presence of a filter support plate with a filtration unit, the Examiner has rejected the amended claims with new art, citing Solomon in view of Miki, et al.

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Applicant's arguments with respect to claim 26 have been considered but are moot in view of the new ground(s) of rejection. The Applicant argues, with respect to claim 26, that the combination of Solomon and Marin with Portinari does not teach the system of pulleys, gears. As stated above, the Examiner has rejected the amended claims with new art, citing Solomon in view of Miki, et al. In addition, when combined with Portinari, the prior art, then shows the filtration unit and the system of pulleys/gears as taught by Portinari. Furthermore, the system of pulleys/gear is only one means to move the cable. Solomon also teaches that the cable must be moved and is fed to a windup (Solomon – figure 1) and up onto a reel. The means to move the cable is already present. The system of pulleys/gears of Portinari is there as one specific means to also ensure that the cable is moved at a consistent pace. As the Applicant has amended the claims, the Examiner has applied art to overcome the revised claims.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MVE

Joseph S. Del Sole

7/27/05

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